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What is claimed is:

1. In a broadband communication system, a method for allocating a communication resource that comprises a communication channel, the method comprising steps of:

receiving a communication resource access request at a time that data received via the communication channel is currently being demodulated; and

in response to receiving the communication resource access request, transmitting a grant of access to the communication channel.

- 10 2. The method of claim 1, wherein the access grant is transmitted prior to completion of the demodulation of the data.
 - 3. The method of claim 1, wherein the step of transmitting a grant of access to the communication channel comprises steps of:

determining a time that a demodulator will be available;

determining a time that a grant of access to the communication channel can be transmitted based on the time that the demodulator will be available; and

transmitting an access grant based on the received request and on the determined time that the grant of access to the communication channel can be transmitted.

- 4. The method of claim 3, wherein the step of transmitting a grant of access to the communication channel further comprises a step of determining a time that the demodulator will finish demodulating the received message.
- 5. The method of claim 3, wherein the step of transmitting a grant of access to the communication channel further comprises a step of determining a time interval between the time that the demodulator will be available and the time that an access grant can be transmitted.
- 30 6. The method of claim 1, wherein the communication resource access request is a preamble.

7. The method of claim 1, wherein the access grant is an acknowledgment.

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- 8. An apparatus for allocating a communication resource in a broadband communication system, wherein the communication resource comprises a communication channel, the apparatus comprising:
- an access request detector that detects a receipt of a communication resource access request;
 - a demodulator that is capable of demodulating messages received via the communication channel;
 - a means for generating a grant of access to the communication channel and the demodulator in response to reception of the communication resource access request; and
 - wherein the communication resource access request is received at a time that the demodulator is engaged in a demodulation of a received message.
 - 9. The apparatus of claim 8, wherein the access grant is generated prior to completion of demodulation of the message.
 - 10. The apparatus of claim 8, wherein the a means for generating a grant of access to the communication channel comprises:
 - a means for determining a time that the demodulator will be available;
- a means for determining a time of transmission of a grant of access to the communication channel based on the determined time of demodulator availability; and
- a means for generating an access grant based on the received communication resource access request and on the determined time of transmission of the access grant.
- 11. The apparatus of claim 10, wherein the means for generating a grant of access to the communication channel further comprises a means for determining a time that the demodulator will finish demodulating the received message.
- 12. The apparatus of claim 10, wherein the means for generating a grant of access to the communication channel further comprises a means for determining a time interval between the time that the demodulator will be available and the time that an access grant may be transmitted.

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- 13. The apparatus of claim 8, wherein the access grant comprises an acknowledgment.
- 14. The apparatus of claim 8, wherein the communication resource access request comprises a preamble and wherein the access request detector comprises a preamble 5 detector that detects a preamble in a received signal.

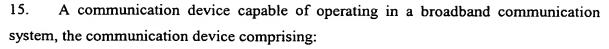
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- a receiver for receiving an communication resource access request;
- an access request detector coupled to the receiver that detects a receipt of the communication resource access request;
 - a demodulator coupled to the receiver that is capable of demodulating messages received via a communication channel;
 - a means for generating a grant of access to the demodulator in response to reception of the communication resource access request;
 - a modulator for modulating the access grant onto a radio frequency signal to produce a modulated access grant;
 - a transmitter for transmitting the modulated access grant; and
 - wherein the communication resource access request is received at a time that the demodulator is engaged in a demodulation of an already received message.
 - 16. The communication device of claim 15, wherein the access grant is generated when the demodulator is engaged in a demodulation of an already received message.
 - 17. The communication device of claim 15, wherein the a means for generating a grant of access to the communication channel comprises:
 - a means for determining a time that the demodulator will be available;
 - a means for determining a time of transmission of a grant of access to the communication channel based on the determined time of demodulator availability; and
 - a means for generating an access grant based on the received communication resource access request and on the determined time of transmission of the access grant.
 - 18. The communication device of claim 17, wherein the means for generating a grant of access to the communication channel further comprises a means for determining a time that the demodulator will finish demodulating the received message.
 - 19. The communication device of claim 17, wherein the means for generating a grant of access to the communication channel further comprises a means for determining a time



interval between the time that the demodulator will be available and the time that an access grant may be transmitted.

- The communication device of claim 15, wherein the communication resource
 access request comprises a preamble and wherein the access request detector comprises a preamble detector capable of detecting the preamble.
 - 21. The communication device of claim 15, wherein the access grant comprises an acknowledgment.